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SQUAMOUS CELL CARCINOMA OF THE URETER AS A LATE SEQUELA OF CUTANEOUS URETEROSTOMY : REPORT OF A CASE

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While cutaneous ureterostomy, as one of methods of urinary diversion, is a simple and convenient procedure, it has several kinds of disadvantages or complications such as urine leakage, necessity of catheter insertion, recurrent infection, stricture development, stone formation, or chronic renal failure. The authors are presenting here a case of squamous cell carcinoma of the ureter which occurred 17 years after cutaneous ureterostomy.

CASE REPORT

A 45-year-old official was admitted to the Department of Urology, Niigata University Hospital on Jan. 18, 1974, complaining of difficulty in catheter insertion from the ureterostomy stoma to the renal pelvis on the left. In 1952 a calculus was removed from the right ureter through ureterolithotomy. In September 1956 he had undergone bilateral cutaneous ureterostomies on account of contracted bladder of unknown origin. Since then management of catheters had been cared chiefly by the patient himself because of his unwillingness to visit the hospitals. Rubber catheters of 21~24 Charriere sizes had been passed and the renal pelvis had been irrigated with 0.01% solution of Rivanol or Solution G. For 17 years the urine flow and renal function remained satisfactory in spite of occasional episodes of upper urinary tract infection.

On Jan. 13, 1974 the patient tried to exchange ureteral catheters without success

on the left side. Immediately he visited the authors' department. Several attempts to pass catheters after preliminary gradual dilatation with metal bougies failed to get urine. Plain film of the abdomen on Jan. 16 (Fig. 1) showed calculous shadows in the both renal areas and suggested a false passage of the left indwelling ureteral catheter. Drip infusion urography on Jan. 18 (Fig. 2, A) and subsequent retrograde ureterography on the left side (Fig. 2, B) confirmed a false passage of the catheter and extravasation of the contrast medium. Admission on that day with a purpose of immediate nephrostomy on the left.

Physical examination revealed a thin and

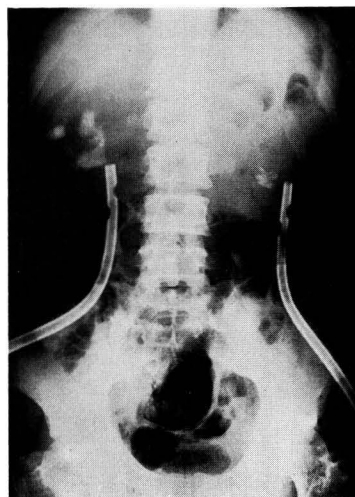


Fig. 1. Plain film : abnormal course of catheter (left).

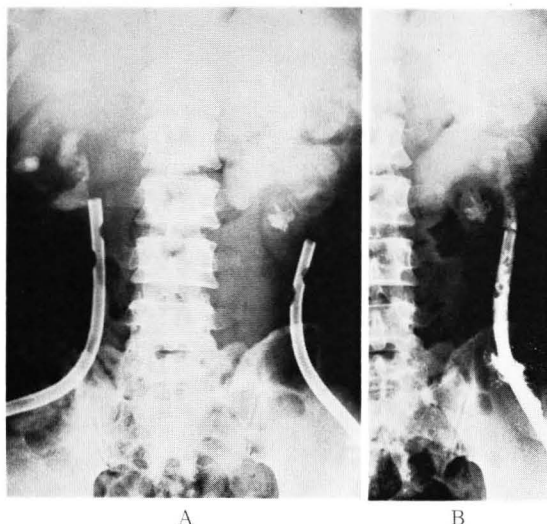


Fig. 2. A. Drip infusion urography.
B. Retrograde ureterography: extravasation of contrast medium.

tall man. The heart and lungs were normal. Both kidneys were not palpated, though there was some tenderness on the left renal region. Blood pressure measured 120/80 mm Hg. Hematological examinations were within normal limits except a slight acceleration of erythrocyte sedimentation rate. Cloudy urine from each kidney contained many pus cells and bacilli. Blood urea nitrogen measured 23 mg/dl and other blood chemical findings were within normal limits.

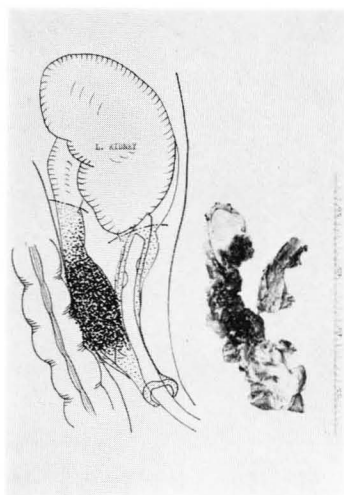


Fig. 3. Gross appearance of specimen with schematic illustration.

Under intubation anesthesia the left ureter was exposed through cicatric tissue with some difficulty. The ureteral catheter took a false course, running laterally along with the lower pole of the left kidney. In the true course of left ureter a tumor of hen's egg size was met in its abdominal portion, which was adherent to the descending colon. Releasing it from the colon, the tumor was removed together with the entire course of the remaining left ureter and the false passage (Fig. 3). A nephrostomy catheter was passed into the renal

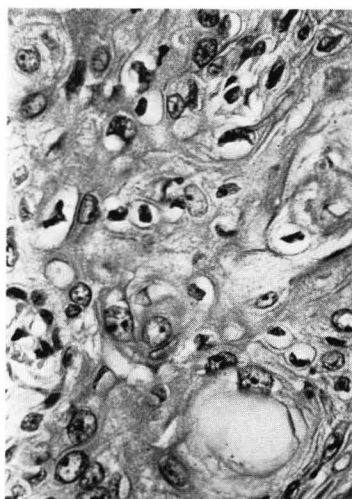


Fig. 4. Microscopic section of tumor: squamous cell carcinoma.

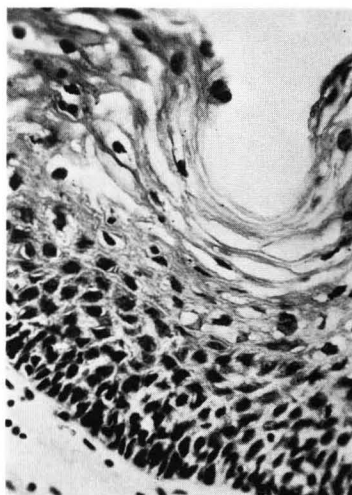


Fig. 5. Microscopic section of ureteral mucosa: squamous cell metaplasia.

pelvis through the renal parenchyma and the wall of the renal pelvis was closed. The calculus, the shadow of which was shown on the plain film, was not found in the renal pelvis.

The tumor measured $7.6 \times 3.3 \times 1.7$ cm, weighing 30 g. Pathological finding was squamous cell carcinoma (Fig. 4). On careful examination of the specimen there was found also squamous cell metaplasia of the mucosa in the upper portion of the left ureter (Fig. 5). In the thickened ureteral wall fibrosis and round cell infiltration of the submucosa and muscularis were evident.

Postoperative course was uneventful. Drainage of urine through left nephrostomy tube was satisfactory. Because of pathological diagnosis of squamous cell carcinoma, treatment with bleomycin was given from Feb. 1 to March 5 with a total dose of 150 mg. He was discharged on March 16. On June 14, 1974 a fecal fistula from the descending colon developed in the surgical scar of the left flank. As general malaise and emaciation progressed, the patient was admitted again to the authors' department. In spite of medical treatment the general condition deteriorated gradually, and the patient expired on Sep. 4, 1974. Autopsy was not obtained.

DISCUSSION

Cutaneous ureterostomy is not a satisfactory method of urinary diversion because of its inconvenience and complications. Comparing nephrostomy with cutaneous ureterostomy, Wosnitzer and Lattimer (1960)¹⁾ stated that they had experienced troubles concerning tube replacement such as difficulty in reinsertion, plugging, perforation or severe bleeding in case of nephrostomy, while in case of ureterostomy stricture or calculus formation. And they regarded ureterostomy as slightly less troublesome and relatively safe. In a follow-up study of urinary diversion, Sato (1971)²⁾, one of the authors, verified a longevity of twenty years or more in cases of cutaneous ureterostomy, although most of the patients

often suffering from pyelonephritis, calculus and/or stricture formation. Tumor development in the ureterostomized ureter, however, has not been recorded in the literature.

As to tumor occurrence following urinary diversion, it is known that ureterosigmoidostomy was rarely accompanied with colonic tumor. Whitaker et al. (1971)³⁾ and Rivard et al. (1975)⁴⁾ reviewed such cases in the literature, respectively. The former collected 28 cases and the latter 32 cases. But, of these cases, the tumors were situated mainly at the site of ureterocolonic anastomosis and were chiefly of glandular type, which suggested that the tumors might be of colonic origin. In the present case the tumor was situated in the upper portion of the ureter causing ureteric obstruction. Though it was adherent to the descending colon, it may be of ureteral origin, because the pathology was squamous cell carcinoma and there was also squamous cell metaplasia of the ureteral mucosa. Chronic infection and irritation due to indwelling catheters may be causative.

SUMMARY

A case of squamous cell carcinoma of the ureter, where cutaneous ureterostomy had been performed 17 years previously, was presented, in which chronic infection and irritation due to indwelling catheters might be causative.

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和文抄録

尿管皮膚瘻術の晩期合併症としてみられた尿管扁平上皮癌の1例

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尿路変向の1つである尿管皮膚瘻術後17年を経て、左尿管から扁平上皮癌が発生した症例を経験したので報告した。

患者は45歳の公務員で、28歳のときに原因不明の萎縮膀胱で両側尿管皮膚瘻術が施行された。術後の経過は比較的順調であったが、17年後の1974年1月13日に左尿管にカテーテルがはいらなくなり、同18日腎瘻術を施行した。このとき尿管下端は皮膚口より約5cmの場所で一塊の灰白色、球形の腫瘍の中に埋まり、腫

瘍は一部下行結腸と癒着していたが、剝離して腫瘍と尿管の摘除をおこない、腎盂は縫合閉鎖して腎瘻を設けた。腫瘍は尿管から発生した扁平上皮癌で、他の尿管粘膜に扁平上皮化生がみられた。同年6月創部に結腸瘻を形成し、漸次全身状態が悪化して、同9月4日死亡した。

カテーテル留置による慢性炎症と刺激が腫瘍発生の原因と考えられた。